MITROPOL'SKIY, A.N., kand.med.nauk; MURCHAKOVA, A.F., kand.biolog.nauk (Leningrad)

Study of thyroid function in atherosclerosis. Klin.med. 37 no.6:89-92 Je '59. (MIRA 12:8)

1. Iz kafedry fakul'tetskoy terapii (nach. - prof.V.A.Beyer) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M.Kirova.
(ARTHRIOSCLEROSIS, physiol.
thyroid gland (Rus))
(THYROID GLAND, physiol.
in arteriosclerosis (Rus))

BLESTKINA, T.G.; MITROPOL'SKIY, A.N.; MURCHAKOVA, A.F. (Leningrad)

Absorption of radioactive iodine by the thyroid gland in patients with mitral defects of a rheumatic nature. Vrach.delo no.11:1207 N '59. (MIRA 13:4)

1. Khirurgicheskaya klinika dlya usovershenstvovaniya vrachey (nachal'nik - prof. P.A. Kupriyanov) i klinika fakul'tetskoy terapii No.1 (nachal'nik - prof. V.A. Beyyer) Voyenno-meditsinskoy ordena Lenina Akademii im S.M. Kirova.
(THYROID GLAND) (IODINE--ISOTOPES) (HEART--DISEASES)

MITROPOL'SKIY, A.N.

SOROKIN, P.A., dots.; GAYZHIYEV, S.A., kand.med.nauk; MITROPOL'SKIY, A.N., kand.med.nauk (Leningrad)

Some problems in the diagnosis of mitral stenosis in connection with its surgical treatment. Klin.med. 36 no.1:60-67 Ja '58. (MIRA 11:3)

1. Iz khirurgicheskoy kliniki usovershenstvovaniya vrachey (nach.-deystvitel'nyy chlen AMN SSSR prof. P.A.Kupriyanov) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M.Kirova.

(MITRAL STENOSIS, diag.
problems in evaluation for surg. (Rus)

MITROPOL'SKIY, A.N., kand.med.nauk, mayor.med.sluzhby

Treating peptic ulcers and different forms of gastritis with novocaine taken internally. Vrach.delo no.6:655 Je '58 (MIRA 11:7)

1. Kafedra terapii dlia usovershenstvovaniya vrachey (nachal'nik - prof., polkovnik med.sluzhby M.F. Ryabov) Voyenno-meditsinskoy akademii im. S.M. Kirova.
(PEPTIC ULCER)
(STOMACH--DISEASES)
(NOVOCAINE)

MITROPOL'SKIY, A.N., mayor med. sluzhby, kand. med. nauk

Treatment of various forms of chronic gastritis and peptic ulcer with intravenous novocaine infusion. Voen. med. zhur. no.3:32-36 Mr. '58. (MIRA 12:7)

(PEPTIC ULCER, ther.
procaine, intravenous admin. (Rus))
(GASTRITIS, ther.
same)
(PROCAINE, ther. use
chronic gastritis & peptic ulcer, intravenous admin. (Rus))

SOROKIN, P.A.; MITROPOL'SKIY, A.N.; GADZHIYEV, S.A.; BLESTKINA, T.G.

Changes in certain indexes of cardiovascular function in mitral stenosis following commissurotomy. Terap. arkh. 29 no.8:3-9 '57. (MIRA 11:4)

1. Iz kliniki fakul'tetskoy terapii (nach.-prof. B.A.Beyyer) i iz kliniki khirurgii dlya usovershenstvovaniya vrachey (nach.-prof. P.A. Kupriyanov) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M.Kirova.

(COMMISSUROTOMY,
postop. cardiovasc. funct. (Rus)

MITROPOL'SKIY, Aristarkh Konstantinovich; ATRASHENOK, P.V., dots., kand. fiz.-matem. nauk, retsenzent; GORSKIY, P.V., dots., kand. sel'khoz. nauk, retsenzent; OSIPOV, P.Ye., dots., kand. tekhn. nauk, otv. red.; VASIL'YEVA, N.V., red.

[Elements of mathematical statistics; a textbook for students of the Forestry Department] Elementy matematicheskoi statistiki; uchebnoe posobie dlia studentov lesokhoziaistvennogo fakul'teta. Leningrad, Leningr. lesotekhn. akad., 1965. 174 p. (MIRA 18:11)

MITROPOL'SKIY, Aristarkh Konstantinovich; VORNOVITSKIY, M.Ya., red.

[Short mathematical tables] Kratkie matematicheskie tablitsy. Izd.3. Moskva, Nauka, 1965. 93 p. (MIRA 18:4)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001134700011-6

MITROPOL'SKIY, Aristarkh Konstantinovich; SHALAYEVSKIY, O.V., red.; ROZENGAUZ, N.M., red.; LUK'YANOV, A.A., tekhn. red.

[Technique of statistical calculations] Tekhnika statisticheskikh vychisleniĭ. Moskva, Gos.izd-vo fiziko-matem. lit-ry, 1961. 479 p. (MIRA 14:6)

(Mathematical statistics)

MITROPOL'SKIY, Aristarkh Konstantinovich; RYVKIN, A.Z., red.; MURASHOVA, [illegible], tekhn.red.

[Concise mathematical tables] Kratkie matematicheskie tablitsy. Moskva, Gos.izd-vo fiziko-matem.lit-ry, 1959. 95 p. (MIRA 12:9)

(Mathematics--Tables, etc.)

MITROPOL'SKIY, A. K.

nm Call Nr: AFF 1108825

Transactions of the Third All-union Mathematical Congress, Moscow, Jun-Jul '56, Trudy '56, V. 1, Sect. Rpts., Izdatel'stvo AN SSSR, Moscow, 1956, 237 pp.

MITROPOL'SKIY, A.K.

Distribution determinants of a series of natural numbers. Usp. mat.nauk 10 no.4:143-144 '55. (MLRA 9:1)
(Series)

MITROPOL'SKIY, A. K. "

Mitropol'skiy, A. K.- "Computing multiple-correlation equations," Trudy Leningrad. Lesotekhn. akad. im. Kirova, No 65, 1949, p. 73-92

SO: U-5240, 17, Dec. 53, (Letopis 'Zhurnal 'nykh Statey, No. 25, 1949).

MITROPOL'SKIY, A.K.

Mitropolskiy, A.K. "Curved distrivutions. Type B", Trudy Lesotek m. alad. im. Kirova, No. 63, 1948, p. 58-59, - Bibliog: 5 items.

SO: U-3042, 11 March 53, (Letopis 'n kh State, No. 9, 1949)

MITROPOL'SKIY, A.K.

Ob ustanovlenii korrelyatsionnykh uravneniy po sposobu Chebysheva. IAN, ser. matem. (1937), 125-138.
O vychislenii korrelyatsionnykh uravneniy pri malom chisle ispytaniy.L., Trudy lesotekhn. akad., 48 (1937), 3-48.
O mnozhestvennykh nelineynykh korrelyatsionnykh uravneniyakh. IAN, ser. matem. (1939) 399-406.

SO: Mathematics in the USSR, 1917-1947
edited by Kurosh, A.G.,
Markushevich, A.I.,
Rashevskiy, P.K.
Moscow-Leningrad, 1948

USSR/Farm Animals - Honey Bee Q-7

Abs Jour : Ref Zhur - Biol., No 6, 1958, No 26261

Author : Nazarov I.A., Volikanov V.F., Mitropol'skiy A.G.
Inst : Not Given
Title : The Management of Bees in Horizontal Hives (Soderzhaniye pchel v ul'yakh-lezhakakh)

Orig Pub : Pchelovodstvo, 1957, No 6, 20-23

Abstract : The results of practical observations made under conditions prevailing in the Azerbaijan SSR, White Russian SSR, and Tambov Oblast' are given.

Card : 1/1

MITROPOL'SKIY, A.K.

Correlation functions. Nauch.trudy LTA no.94:3-4 '62. (MIRA 16:1)
(Functions)

VINOGRADOVA, Ye.V.; KOST, A.N.; MITROPOL'SKAYA, V.N.;
TERENT'YEV, A.P.

Syntheses based on vinylpyridines. Part 8: Introduction of functional substituents into pyridylethyloxindoles. Zhur. ob. khim. 33 no.5:1556-1561 My '63. (MIRA 16:6)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.
(Pyridine) (Oxindole)

VINOGRADOVA, Ye.V.; MITROPOL'SKAYA, V.N.; KOST, A.N.; TERENT'YEV, A.P.

Synthesis of pyridylethyloxindole. Dokl. AN SSSR 144 no.5: 1046-1049 Je '62. (MIRA 15:6)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.
2. Chlen-korrespondent AN SSSR (for Terent'yev).
(Oxindole) (Pyridine)

KOST, A.N.; MITROFOL'SKAYA, V.N.; FORTINOVA, S.L.; KRASNOVA, V.A.

Keto acids of the indole series. Zhur. ob. khim. 34 no.8:2992-2992 S '64. (MIRA 17:11)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova i Institut khimii prirodnykh soyedineniy AN SSSR.

ACC NR: AP6033166 SOURCE CODE: UR/0033/66/043/005/0963/0966

AUTHOR: Mitropol'skaya, O. N.

ORG: State Astronomical Institute im. P. K. Shternberg (Gos. astronomicheskiy in-t)

TITLE: Differences in the profiles of two infrared hydrogen lines in a facula and the photosphere

SOURCE: Astronomicheskiy zhurnal, v. 43, no. 5, 1966, 963-966

TOPIC TAGS: spectrography, hydrogen line, ~~profile, infrared~~, SOLAR facula, photosphere, photocell, SOLAR IR RADIATION

ABSTRACT: This article presents the results of observations of hydrogen-line profiles λ21655 Å, the Brackett series, and λ12818 Å, the Paschen series in a facula and in the photosphere by means of a sulphur-lead photocell. For comparison, the profile differences were computed for two points ($\Delta\lambda$ = 5 Å and $\Delta\lambda$ = 10 Å) of the profile in the center and at the solar limb. The agreement between theory and observations is satisfactory. Orig. art. has: 2 figures, 1 table, and 6 formulas.

SUB CODE: 03/ SUBM DATE: 03Jan66/ ORIG REF: 001

Card 1/1 UDC: 523.77

MITROPOL'SKAYA, O.N.

The [illegible] 21655. [illegible] to the radio spectrum.
Ze ron.zhur. 11 no.5:950-953 '56. (MLRA 9:10)

1. Gosudarstvennyy [illegible] im. S.I.Ordzhonikidze.
(Mikrowaves)

L 11036-63
ACCESSION NR: AP3001236

2

and regardless of the magnitude of the reversal. The difference between the DELTA-r profiles was computed theoretically for the same DELTA-lambda and for 2 different ... from the center of the disk. It was assumed that the formation of the rough is the result of true absorption, whereas the difference in facula and photosphere temperature with depth follows the author's model in Krymsk. astrofiz. observ., Izv., v. 8, 1952, 93, even though the model of the photosphere employed here is that taken from C. de Jager, Rech. Astr. Obs., Utrecht, v. 13, 1952, Part 1. This treatment leads to a better accordance of the H-sub-alpha and H-sub-beta profiles in the photosphere with the observed profiles. The theoretical DELTA-r values exhibit qualitative accordance with the observed values; this confirms the validity of the initial assumptions, and, in particular, that of true absorption in the wings. There are 4 figures and 1 table. Thanks are expressed to G. I. Nevska for assistance in the computations.

ASSOCIATION: Gos. Astronomicheskiy in-t imeni P. K. Shternberga (State astronomical institute)

SUBMITTED: 04Feb62 DATE ACQD: 01Jul63 ENCL: 00

SUB CODE: AS, PH NO REF SOV: 005 OTHER: 005

Card 2/2

L 10173-63 EWT(l)/FCC(w)/BDS/ES(v) AFFTC/ASD/SSD-3 Pe-4 GW

ACCESSION NR: AP3001236 S/0033/63/040/003/0427/0432 63
61

AUTHOR: Stratonovich, O. R.

TITLE: Difference between the H-sub-alpha and H-sub-beta line profiles in a facula and in the photosphere

SOURCE: Astronomicheskiy zhurnal, v. 40, no. 3, 1963, 427-432

TOPIC TAGS: solar faculae, solar photosphere, solar spectrography, solar tower telescope, Crimean astrophysical observatory

ABSTRACT: The paper relates an analysis of the H-sub-alpha and H-sub-beta line profiles in a facula and in the adjacent photosphere at various distances from the center of the solar disk obtained from spectrograms recorded at the solar tower telescope (director is Severnyy, A. B., Izvest. Astron. observ., Izv., v. 15, 1963, 3) of the Crimean Astrophysical Observatory. The measurements were made at a distance of 2 and 3 angstrom from the center of the H-sub-alpha line. The dependence of the difference between the profiles in a facul and in the photosphere upon the existence of a reversal at the center of the l ne is examined, and it is concluded that the difference between the wings of the lines in a facula and in the photosphere can be noticeable regardless of whether the e is any reversal at all

Card 1/2

Corpuscular Streams from Plages

shown by Figs. 1 and 2 is that for plages of group II_f there is no well-defined dependence to the left of $\Delta t = 0$, while for plages in group I the opposite is the case. Thus, the average deviation of corpuscular streams from plages from the radial direction apparently does not exceed 6°.

Figure captions: Fig. 1 - Statistical curves for solar cycle No. 16; Fig. 2 - Statistical curves for cycle No. 18.

There are 2 figures and 3 references: 2 Soviet and 1 non-Soviet.

SUBMITTED: September 6, 1960.

Card 3/5

S/033/61/038/001/017/019
E032/E314

Corpuscular Streams from Plages

the international magnetic indices C given by Chapman and Bartels (Ref. 3) and the plages used are the same as those in Ref. 2. The number of plages used for the three curves (I, II_u and II_f) was 118, 195 and 71, respectively.

Fig. 2 refers to the period June, 1951 - November, 1952. In Fig. 2 the planetary geomagnetic indices K_p are plotted along the vertical axis. The number of plages for the three groups was 75, 11 and 63, respectively. Both figures confirm the conclusions drawn in Ref. 2. In particular, in the case of plages in group II_u there is no well-defined dependence of changes in the field on the phase Δt. In Fig. 2, there is a maximum at $\Delta t \approx +5^d$ which is said to be accidental since a corresponding graph given in Ref. 2, which was based on a considerably greater number of active regions, was found to be quite smooth. The new result

89334

S/033/61/038/001/017/019
E032/E314

3,9100 (1121 ONLY)
3,1800 (1041, 1062, 1178)

AUTHOR: Mitropol'skaya, O.N.

TITLE: Corpuscular Streams from Plages

PERIODICAL: Astronomicheskiy zhurnal, 1961, Vol. 38, No. 1, pp. 189 - 191

TEXT: The present author has carried out a statistical study of the radiality of streams emitted by plages and responsible for M-type magnetic disturbances. Using the method of "superposition of epochs" described by Mustel' (Ref. 1), separate statistical curves were obtained for plages passing through the apparent centre of the solar disc (I in the Figs. 1 and 2) for plages passing not nearer than 6 deg from the centre of the disc but located on the same hemisphere as the apparent centre (II_f) and the same plages in the other hemisphere (II_u). The curves were plotted using the method described by the present author in Ref. 2. The curves in Fig. 1 were obtained for the period November, 1929 - August, 1931. The horizontal axis gives

Card 1/3

A Connection Between the Time Lag of Geomagnetic Disturbances and the Relative Sun Spot Number

78008
SOV/33-37-1-8/31

strong dependence of Δ t on R (except near the minimum of solar activity) and practically no dependence on the phase of the solar activity. She confirms here her previous finding that there is only one maximum and one minimum in the curve which correlates the values Δt and R, thus disagreeing with the conclusion of J. C. Pecker and W. O. Roberts that there is a "cone of avoidance" and consequently, two maxima, in the curve. The author thanks E. R. Mustel' for valuable advice received. There are 5 figures; and 11 references, 8 Soviet, 1 Swiss, 1 U.S., 1 U. K. The U.S. and U.K. references are: J. C. Pecker, W. O. Roberts, J. of Geophs. Res., 60, 33, 1955; E. R. Mustel and O. Mitropolskaya, The Observatory, 79, 15, 1959.

ASSOCIATION: Krym Astrophysical Observatory of the Academy of Sciences, USSR (Krymskaya astrofizicheskaya observatoriya Akademii nauk SSSR)

Card 2/2

3.1800

78008
SOV/33-37-1-8/31

AUTHOR: Mitropol'skaya, Q. N.

TITLE: A Connection Between the Time Lag of Geomagnetic Disturbances and the Relative Sun Spot Number

PERIODICAL: Astronomicheskiy zhurnal, 1960, Vol 37, Nr 1, pp 63-66 (USSR)

ABSTRACT: In 1959 the author came to the conclusion that geomagnetic disturbances were caused by the Central Meridian Passages (CMP) of Ca^+ plages, and that the lag Δ t between CMP and the geomagnetic disturbance was about 5 hr 0 in the average. Here she discusses extensive observational material which connects the relative numbers of sun spots, R, and the phase of the solar activity, with Δt. Several curves, for three interval periods: 1929-1933, 1942-1944, and 1950-1953, as well as for the mean of these periods, are plotted and indicate that there is

Card 1/2

3(1), 3(6)

AUTHOR: Mitropol'skaya, O.N.

SOV/33-36-2-4/27

TITLE: Some Results of Statistical Treatment of Geomagnetic Disturbances on the Declining Branch of Solar Activity

PERIODICAL: Astronomicheskiy zhurnal,1959,Vol 36,Nr 2,pp 224-232 (USSR)

ABSTRACT: The present statistical investigation is carried out for three periods: 1929 - 1933, 1942 - 1944 and 1951 - 1953, the material has been taken from [Ref 1 - 3]. The paper is divided into two parts. In the first part the dependence on time of Δt = time of beginning of the disturbance relative to the moment of the CMP of the plage and of ΔT = duration of the disturbance are studied. In the second part the superposed epoch method is applied. The results are represented in numerous figures. The author thanks E.R. Mustel' for advices, P.M. Matveyev and T.M. Shkol'nikova for drawing the figures and calculation works. There are 6 figures, and 13 references, 7 of which are Soviet, 3 American, and 3 English.

ASSOCIATION: Krymskaya astrofizicheskaya observatoriya Akademii nauk SSSR (Crimean Astrophysical Observatory of the AS USSR)

SUBMITTED: January 27, 1959

Card 1/1

On the Velocity Spectrum of Corpuscles in Solar Corpuscular Streams SOV/33-36-1-3/31

during the change of sign of the heliographic latitude B_o of the disk's center. The paper contains an extensive discussion of the results and a number of conclusions.
There are 2 figures, and 19 references, 12 of which are Soviet, 4 American, 2 English, and 1 French.

ASSOCIATION: Astronomicheskiy sovet Akademii nauk SSSR (Astronomic Council AS USSR)

SUBMITTED: November 3, 1958

Card 2/2

3(1)
AUTHORS: Mustel',E.R., and Mitropol'skaya,O.N. SOV/33-36-1-3/31

TITLE: On the Velocity Spectrum of Corpuscles in Solar Corpuscular Streams

PERIODICAL: Astronomicheskiy zhurnal,1959,Vol 36,Nr 1,pp 5-16 (USSR)

ABSTRACT: During 1951-1953 the velocity spectrum of corpuscles ejected from flocculi was investigated. Under the assumption that the velocity spectrum of corpuscles ejected from every point of the given flocculus is the same, the velocity v_1 of the fastest corpuscles and the velocity v_2 of the slowest corpuscles and the total range of velocities $\Delta v = v_1 - v_2$ was derived. The method of evaluation is described.
Basing on these results the connection of flocculi with geomagnetic activity established in a previous paper [Ref 6] was revised. The passage of flocculi over the visible center of the solar disk explains not only the rise of disturbances but also the appearance and disappearance of geomagnetic sequences during the appearance of new flocculi and correspondingly the disappearance of old flocculi, and further the appearance, disappearance, strengthening and weakening of geomagnetic sequences

Card 1/2

Flocculi (Plages) and the Twenty-Seven Day Recurrence Tendency in Magnetic Disturbances

SOV/33-35-2-2/21

It is confirmed that during the years before a minimum of the solar activity the motion of corpuscles in streams are very slow.
There is 1 table, 1 figure, and 6 references, 3 of which are Soviet, 2 American, and 1 English.

ASSOCIATION: Krymskaya astrofizicheskaya observatoriya Akademii nauk SSSR (Crimean Astrophysical Observatory of the AS USSR)

SUBMITTED: January 4, 1958

Card 2/2

3(1)
AUTHORS: Mustel' E.R., and Mitropol'skaya, O.N. SOV/33-35-2-2/21

TITLE: Flocculi (Plages) and the Twenty-Seven Day Recurrence Tendency in Magnetic Disturbances (Flokkuly i dvadtsatisemidnevnaya povtoryayemost' geomagnitnykh vozmushcheniy)

PERIODICAL: Astronomicheskiy zhurnal, 1958, Vol 35, Nr 2, pp 194-207 (USSR)

ABSTRACT: The present paper is a continuation of the preceding publications [Ref 1,2] and contains a comparsion of the 27 day sequences of geomagnetic disturbances during the years 1929 - 1933 and the flocculi. The authors used the Meudon and Zürich synoptic maps, observations of the Coimbra and Ebro - Observatory as well as the K-indexes of N.P. Ben'kova. The result of the investigation is the assertion that all 11 considered sequences of geomagnetic disturbances can be combined in a natural manner with the passage of the flocculi across the visible center of the solar disk. Some corrections concerning this assertion are already mentioned in [Ref 1] and [Ref 2].

Card 1/2

R

MUSTEL', E.R.; MITROPOL'SKAYA, O.N.

Relationship between calcium flocculi and geomagnetic and ionospheric disturbances. Izv.Krym.astrofiz.obser. 18: 162-181 '58. (MIRA 13:4)
(Sun--Flocculi) (Magnetic storms)

MITROPOL'SKAYA, O.N.

At solar observation stations. Mezhdunar. geofiz. god no.3:88-92
'57. (MIRA 11:5)
(Sun--Observations)

MITROPOL'SKAYA, O.N.

Profiles of lines H and H of hydrogen in faculae and the photosphere. Izv.Krym.astrofiz.obser. 15:130-135 '55.
(MIRA 13:4)

(Spectrum, Solar)

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MITROFOLSKAYA, O.N.

"Study of Physical Conditions in Solar Faculae," Izv. Krymsk. Astrofiz. Observ., 11, 1954, pp 159-164

Spectrophotometric Study of bright flocculi revealed the following results. The amount of neutral iron atoms in a facula is smaller than in the photosphere. The difference of effective temperatures between photosphere and facula amounts to 1°7. The decreasing breadth of H and C_a lines in the facula is ascribed to the excess of ultraviolet radiation at the boundary of Lyman series, which is estimated to be equivalent to 8,000°K of a radiating black body. (RZhAstr, No 3, 1955)

SO: Sum No. 536, 10 Jun 55

MITROPOL'SKIY, O. Yu.

"Construction of the Curve of Growth and Investigation of Physical Conditions in Solar Molecules." Sub 3 May 51, Pulkovo Order of Lenin State Astronomical Observatory.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 478, 3 May 55.

MITROPOL'SKAYA, O. N.

PA 18/49T96

USSR/Physics
Astronomy
Comets

Sep/Oct 48

"The Charge of the Tail of a Comet and Its Effect on the Rate of Enlargement of the Tail," S. B. Tsikel'ner, O. N. Metropol'skaya, Crimean Astrophys Obs, 6½ pp

"Astron Zhur" No 5

Examines phenomenon of positive charge in the tail of a comet caused by electron dispersion due to heat movement. Dispersion becomes practically unimportant at a certain value of the charge. Faster electrons leave the tail [redacted]

18/49T96

USSR/Physics (Contd) Sep/Oct 48

at a certain time thus increasing positive charge in the tail. Charge increases flow of electrons from space into tail of comet. Charge, determined by extent to which this influx is compensated by electrons leaving the tail, acts on ions of the tail, causing them to extend from the axis. An appreciable part (up to 0.1) of the tail's axis is due to this cause. A mechanical theory of the shape of comets' tails should consider this effect in the second approximation.

[redacted]

18/49T96

L 35837-66

ACC NR: AP6016301

thiooxines. This is followed by a discussion of the concentration of the solutions and of the spectrographic determinations. Experimental results are shown in tabular form. Orig. art. has: 4 tables.

SUB CODE: 07/ SUBM DATE: 30Dec64/ ORIG REF: 004

ns

Card 2/2

L 35837-66 EWT(m)/EWP(t)/ETI IJP(c) JD/HW

ACC NR: AP6016301 (A) SOURCE CODE: UR/0075/66/021/001/0094/0097

AUTHOR: Kharkover, M. Z.; Desyatkova, M. A.; Barkovskiy, V. F.; Mitropol'skaya, N. A.; Genopol'skaya, T. A.

ORG: Ural State University im. A. M. Gorky, Sverdlovsk (Ural'skiy gosudarstvennyy universitet)

TITLE: Chemical and spectrographic determination of micro impurities of manganese, nickel, cobalt, and copper in lanthanum oxide

SOURCE: Zhurnal analiticheskoy khimii, v. 21, no. 1, 1966, 94-97

TOPIC TAGS: manganese, cobalt, copper, nickel, lanthanum compound, quantitative analysis, METAL PURIFICATION, CHEMICAL PURITY

ABSTRACT: The article describes the use of 8-mercaptoquinoline (thiooxine) for concentrating micro impurities of manganese, nickel, cobalt, and copper from lanthanum oxide. There is a detailed description of the starting materials and reagents used and their purification. This is followed by a discussion of the completeness of the extraction of manganese, nickel, cobalt, and copper. The optimum amount of the reagent (thiooxine) was found to be 200-fold; at this amount, 15 minutes was sufficient for relatively complete formation of

UDC: 543.423

Card 1/2

MITROPOL'SKAYA, M. V.: Master Med Sci (diss) -- "Clinical observations in gripp of children". Moscow, 1958. 12 pp (Inst of Pediatrics Acad Med Sci USSR), 200 copies (KL, No 2, 1959, 125)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001134700011-6

SHTEYMAN, S.I., glavnyy zootekhnik, Geroy Sotsialisticheskogo Truda;
MITROPOL'SKAYA, A.D., zootekhnik-selektsioner, Geroy Sotsialisticheskogo Truda

Methods for the improvement of dairy herds. Zhivotnovodstvo 21 no.5:64-71 My '59. (MIRA 12:7)

1. Plemsovkhoz "Karavoyevo" (for Shteyman).
(Dairy cattle breeding)

SAGORTSCHEW, B. [Zagorchev, B.]; BOZADDŽIEVA, L. [Bozadzhieva, L.]; MITROPOLITSKA, E.

Determination of iron and chromium in the alloys (ferrochrome) and natural products (chromites). Doklady BAN 15 no.5:483-486 '62.

1. Vorgelegt von Akademiemitglied D. Ivanoff [Ivanov, D.], Mitglied des Redaktionskomitees, "Doklady Bolgarskoy Akademii nauk".

SAGORTSCHEW, B. [Zagorchev, B.]; BOZADZIEVA, L. [Bozadzhieva, L.]; MITROPOLITSKA, E.

Chromatographic separation of iron (III) from chromium (III). Doklady BAN 15 no.3:273-276 '62.

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(HEART) (NERVOUS SYSTEM, AUTONOMIC)
(LAMBS)

1. MITROPOLITANSKAYA, R. L.

2. USSR (600)

4. Karakul Sheep

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Acetylcholine

Relationship between the content of acetylcholine and histamine, and the activity of ferments which destroy them in the nerves of different animals. Report I. Acetylocholine and histamine content in the nerves of invertebrates, fishes and amphibia. Trudy Inst. morf. zhiv. no. 6, 1952.

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PA 4796

USSR/Medical Science - Physiology
Histamine

1945

"The System 'Histamine - Histindinedecarboxylase - Histaminase' in the Nerve Tissue of Homoiothermal Animals Subjected to Various Conditions," Ch. S. Kasntojanz, D. E. Ryvkina, R. L. Mitropolitanskaya, 6 pp - Inst. Exper. Morphology im. Severtsov

"CR Acad Sci" Vol XLIX, No 5

Comparasion of the content of histamine, and the activity of histidinedecarboxylase and histaminase, in sense and motor nerves of rats, rabbits, guinea pigs, cats and dogs, in an attempt to clarify the role of the above system in the processes producing excitation in sense nerves and in their associated nerve cells.

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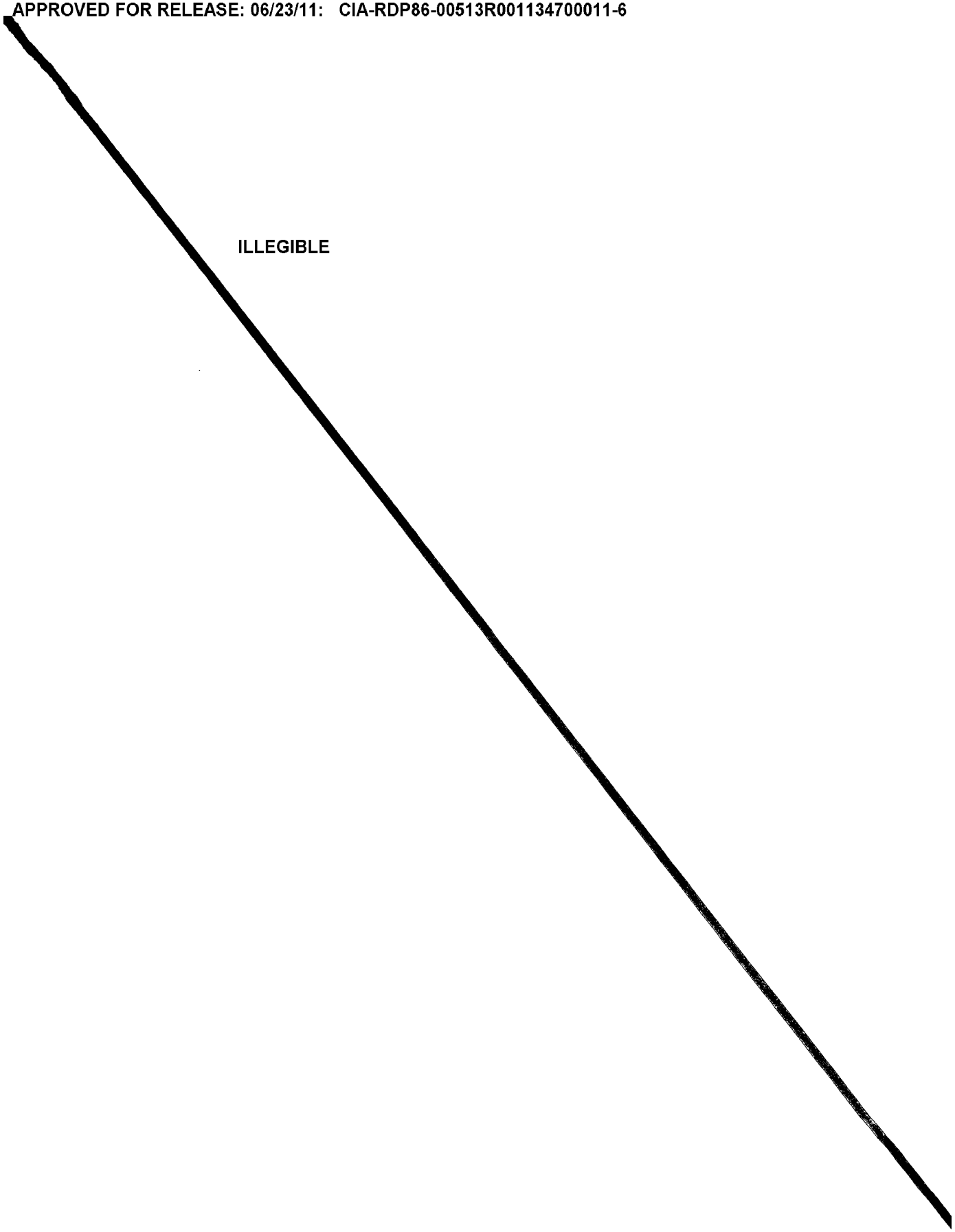

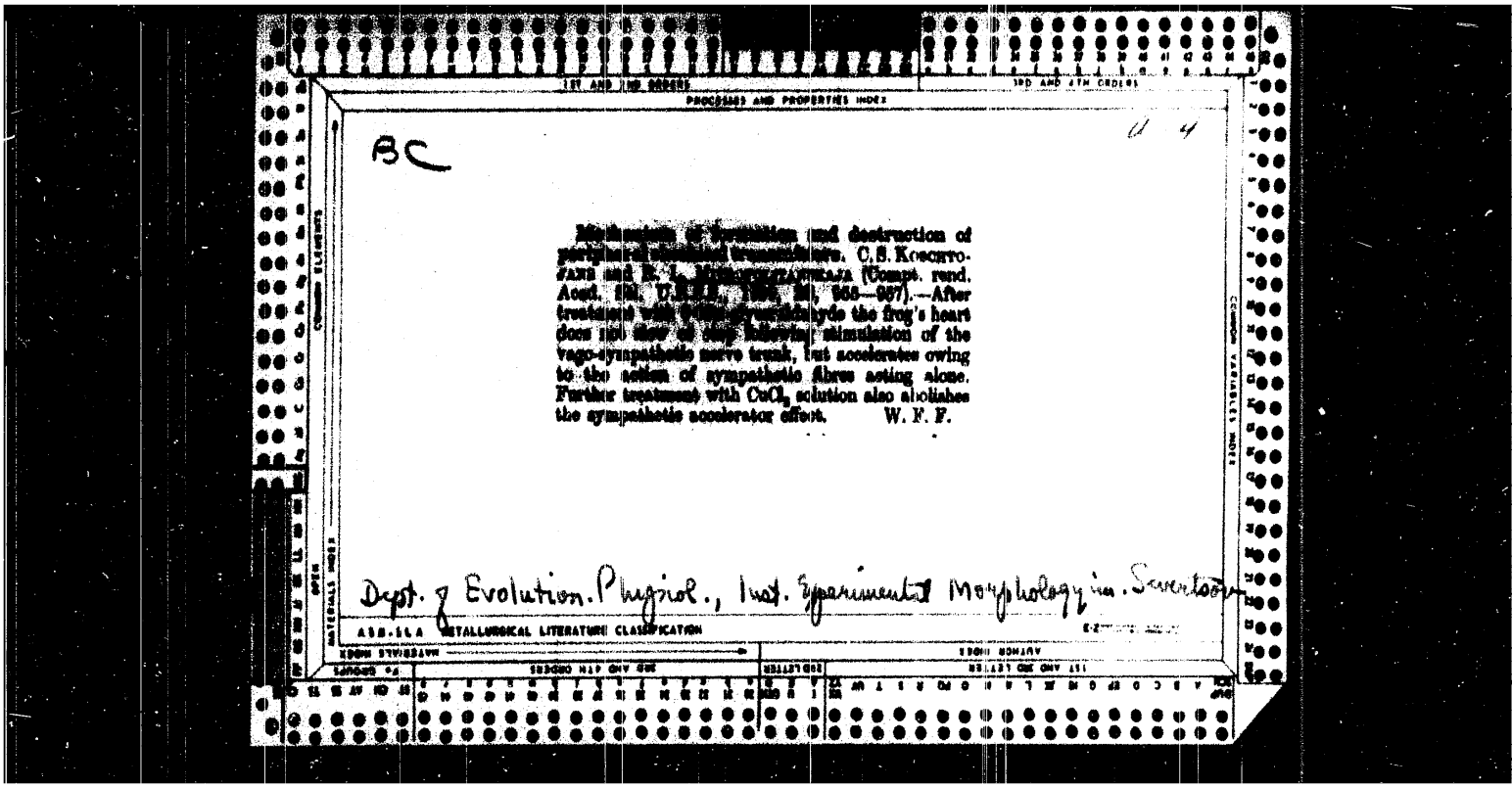

BC

U 4

Mechanism of formation and destruction of peripheral excitation transmitters. C. S. Kocherovans and K. L. [illegible] (Compt. rend. Acad. [illegible]). —After treatment with [illegible] the frog's heart does not slow [illegible] following stimulation of the vago-sympathetic nerve trunk, but accelerates owing to the action of sympathetic fibres acting alone. Further treatment with $CaCl_2$ solution also abolishes the sympathetic accelerator effect. W. F. F.

Dept. of Evolution. Physiol., Inst. Experimental Morphology im. Severtsov

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SOURCE: Bullatin of Experimental Biology and Medicine, Vol 5, pp 382-385, 1938

K-1785, 13 Oct 53

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"Data on the Physiology of Animals in Ontogenesis." (Materialy k fiziologii zhivotnykh v ontogeneze).

"Report 1. Concerning Automatic Intestinal Action of the Human Embryo." (Ob avtomatii kishechnika zarodysha cheloveka).
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"Physiological Character of Smooth Intestine Muscles of Amphibia in Various Periods of Individual Development." (Fiziologicheskaya kharakteristika gladkoy muskulatury kishechnika amfibiy v razlichnyye periody individual'nogo razvitiya).

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MITROPOLEVSKIY, V.A.

21(6) SOV/2713

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Reliny novetskikh uchenykh; doklady poryadkovye i rentgenovye metally. (Reports of Soviet Scientists; Nuclear Fuel and Reactor Metals) Moscow, Atomizdat, 1959. 670 p. (Series: Its: Trudy, vol. 3. 8,000 copies printed.

Ed. (Title page): A.A. Bochvar, Academician, A.P. Vinogradov, Academician, A.P. Zefirov, Corresponding Member, USSR Academy of Sciences, and Professor and G.N. Feklisova; Tech. Ed.: E.I. Mosal'.

PURPOSE: This volume is intended for scientists, engineers, physicians, and biologists working in the production and peaceful application of atomic energy; for professors and students of schools of higher technical education where the subject is taught; and for people interested in atomic science and technology.

COVERAGE: This is volume 3 of a 5-volume set of reports on atomic energy, presented by Soviet scientists at the Second International Conference on the Peaceful Uses of Atomic Energy, held in Geneva from September 1 to 13, 1958. Volume 3 consists of two parts. The first part, edited by A.I. Zubov, is devoted to metallography, preparation, and processing of nuclear reactor material. The second part, edited by A.P. Zefirov, includes 27 reports on metallurgy, metallography, processing technology of fuels and reactor metals, and neutron irradiation effects on metals. The titles of the individual papers in most cases correspond word for word with those in the official English language edition of the Conference proceedings. See AEC/TR/3 for the titles of the other volumes of the set.

Card 11/11

Dmitriyev, P.I., P.A. Petrov, M.A. Mikhaylovskiy, A.N. Shmidt, V.V. Ivanov, and V.I. Kalashnikov, Assembly of the Enclosed Heat Producing Element for a Heavy Water Gas-cooled Power Reactor (Report No. 2053) 655

AVAILABLE: Library of Congress

CHRISTENKO, P.I. [Khristenko, P.I.]; PETROV, P.A.; MITROPOLEVSKIJ, V.A. [Mitropolevskiy, V.A.]; SINELNIKOV, K.D. [Sinel'nikov, K.D.]; IVANOV, V.J. [Ivanov, V.Ye.]; ZELENSKIJ, V.F. [Zelenskiy, V.F.]; MAKVART, J. [translator]; KLIK, F. [translator]

Pin fuel-element for gas cooled heavy water power reactors. Jaderna energie 4 no.11:330-338 N '58.

MITROPOLEVSKIY, V.A.

KHRISTENKO, P. I., PETROV, P. A., MITROPOLEVSKIY, V. A., SINELNIKOV, K. D., IVANOV, V. E. and ZEIENSKIY, V. F.

"Pin Fuel-Element for Gas-Cooled Heavy-Water Power Reactor."

paper presented at 2nd UN Intl. Conf. on the peaceful uses of Atomic Energy, Geneva, 1 - 13 Sep 58.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001134700011-6

ACCESSION NR: AP4040299

central region the magnetic field showed two maxima and fell to zero between them. This behavior is ascribed to an instability of the type discussed by W.E.Nixon, W. F.Cummings, F.H.Coensgen, and A.E.Sherman (Phys.Rev.119,1457,1960) due to the intermingling of two streams of plasma flowing in opposite directions toward the central plane from the regions of high magnetic field beneath the loops. The experiment was repeated with a constriction 1 cm in diameter and 3.5 cm long in the discharge tube and a specially constructed differential flux meter entirely outside the tube. Similar results were obtained. When one end of the constriction was closed with a glass stopper, preventing flow of plasma toward the central plane from one direction, the diamagnetic effect disappeared. Orig.art.has: 5 figures.

ASSOCIATION: none

SUBMITTED: 25Jun63 ATD PRESS: 3084 ENCL: 00

SUB CODE: ME, EM NR REF SOV: 002 OTHER: 004

Card 2/2

ACCESSION NR: AP4040299 S/0057/64/034/006/0993/0997

AUTHOR: Gabovich, M.D.; Mitropan, I.M.

TITLE: Interaction of plasma streams moving in opposite directions along the axis of an induction pinch

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.6, 1964, 993-997

TOPIC TAGS: plasma, plasma containment, plasma stability, hydrogen plasma

ABSTRACT: The behavior of an induction pinch in a hydrogen plasma was investigated. The pinch was produced in a 6.4-cm-diameter glass tube by discharge of a 10-microfarad capacitor bank, charged to about 25 kV, through two copper loops encircling the tube and located 8.4 cm apart. The period of this system was somewhat greater than 6 microsec. The magnetic field at the axis of the tube was measured with a movable probe. When the hydrogen pressure was 0.1 mm Hg, the phenomena observed were the same as previously described by the present authors (ZhTF 32,1371,1962). At a pressure of 0.06 mm Hg, the oscillogram from the magnetic probe was the same as before, when the probe was located beneath one of the copper loops, but it altered as the probe was moved toward the central plane between the two loops. In this

Card 1/2

GABOVICH, M.D.; MITROPAN, I.M.

Interaction of plasma streams moving in opposition along the axis of the induction pinch. Zhur. tekh. fiz. 34 no.6: 993-997 Je '64. (MIRA 17:9)

GABOVICH, M.D.; MITROPAN, I.M.

Topography of a magnetic field, induction currents and hydromagnetic oscillations of a plasma in a pulsed electrodeless discharge. Zhur. tekh. fiz. 32 no.11:1371-1375 N '62. (MIRA 15:11)

1. Institut fiziki AN UkrSSR, Kiyev.
(Magnetic fields) (Induction (Electricity))
(Plasma oscillations)

23722

S/057/61/031/006/006/019
B116/B203

Observation of hydromagnetic ...

ASSOCIATION: Institut fiziki AN USSR Kiyev (Institute of Physics of the AS UkrSSR Kiyev)

SUBMITTED: July 25, 1960

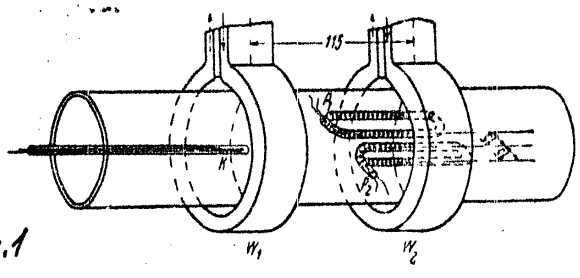

Fig.1

Card 5/5

Observation of hydromagnetic ...

enters the whole plasma. Here, a sudden change of the field (negative to positive) is observed. It is a characteristic feature that the oscillations of the plasma ring occur during the pinch of the magnetic field opposite to the outer field, i.e., of the field, the lines of which are connected with the inner currents in the plasma, and not with the current in the outer winding. It is shown that the observed period of oscillations coincides, as to the order of magnitude, with the period expected according to the approximation of Ref. 3. It is pointed out that in the case of a heavy gas of the same pressure, the oscillation period is larger, which is also confirmed by the oscillograms obtained (hydrogen was replaced by krypton). The increase of the negative field observed in the discharge in hydrogen and the oscillations of the plasma ring were not observed in the discharge in krypton, as had been expected. The present paper was read at the Vtoroye soveshchaniye po teoreticheskoy i prikladnoy magnitnoy gidrodinamike (Second Conference on Theoretical and Applied Magnetohydrodynamics) in Riga on June 30, 1960. There are 7 figures and 5 references, 4 Soviet-bloc and 1 non-Soviet-bloc.

Card 4/5

ring, its motion toward the center, and the pinch of the magnetic flux "frozen" in the plasma. In such a pinch of the magnetic flux, the formation of radial oscillations of the plasma connected with the current ring may be expected. This is confirmed by data obtained with belts P_1 and P_2. The oscillograms obtained with the outer belt P_1 show that the increase in strength of the magnetic field is preceded by the formation of a plasma ring of some dozen ka near the wall. The oscillograms recorded by P_1 and P_2 show a shift of the plasma ring formed on the wall toward the axis. The radial oscillations of the plasma are observed after deformation of the current ring. This is shown by the oscillation of currents and the fluctuations in strength of the magnetic field observed at the beginning of the increase of the "frozen" magnetic field; at that time, the plasma layer connected with the current ring is near the middle of the tube radius. After a few oscillations, the plasma ring may shift toward the tube center because of the weakening of the magnetic field. The plasma ring is shifted toward the tube center when the current in the copper windings approaches its maximum, whereupon the current ring decomposes, the conductivity of the plasma decreases, and the outer field

probe, and permitted the field strength on the axis of the system to be measured. The Rogowskiy belts P_1 and P_2 inside glass tubes permitted an observation and measurement of the annular currents in the gas in two parts of the tube (on the wall and on the axis), as well as an estimation of radial shifts of the current ring. These belts could be replaced by one belt which measured the total annular current in the gas. Another belt served for measuring the current in the copper winding. The circuits of the magnetic probe and of the belts contained integrating RC elements. The latter were chosen so as to observe, on the oscilloscope screen, the amperages and magnetic fields, and not their derivatives. The resulting oscillograms show that the plasma formed in the discharge (discharge in hydrogen at a pressure P=0.12 mm Hg) influences the strength of the magnetic field considerably. At first, the magnetic field easily enters the plasma. An increasing phase shift occurs between the two above-mentioned quantities with transition from the second to the third half-cycle. At the beginning of the third half-cycle, the field on the plasma axis has a direction opposite to the outer field. In the first quarter of the third half-cycle, the strength of this phase-shifted field increases strongly. This may be assumed to be due to the formation of a current

23722
S/057/61/031/006/006/019
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26.1410

AUTHORS: Gabovich, M. D. and Mitropan, I. M.

TITLE: Observation of hydromagnetic oscillations in the plasma of an electrode-less pulsed discharge

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 6, 1961, 676-679

TEXT: The radial oscillations of a plasma connected with the annular current formed in an electrode-less pulsed discharge were investigated in various papers, especially by G. B. F. Niblett, T. S. Green (Ref. 3: Proc. Phys. Soc. 74, 737, 1959). Here, the results of some experiments are presented. The electrode-less pulsed discharge was excited in a quartz or glass tube of 65 mm diameter, surrounded by two parallel-connected copper coils W_1 and W_2 with one winding each (Fig. 1). A battery of 10-μf capacitors charged to 20 kv was discharged into the circuit consisting of the said coils, the lead wires, and the discharger. The inductance of the current circuit was 0.1 microhenry so that the current oscillation period was about 6 μsec. The gas was previously ionized by a high-frequency discharge. The coil K placed in the quartz tube served as a magnetic

Card 1/5

On the Depencence of the Secondary Emission of Negative Ions From the Angle of Glide of Primary Protons on Collision With a Metallic Target

56-1-39/56

are not fewer than the experimental errors and therefore the authors did not succeed in exactly determining the coefficients of the knocking out of negative ions from the difference of current intensities. There are 1 figure and 2 references, 1 of which is Slavic.

ASSOCIATION: Physical-Technical Institute AN Ukrainian SSR (Fiziko-tekhnicheskiy institut Akademii nauk Ukrainskoy SSR)

SUBMITTED: October 5, 1957

AVAILABLE: Library of Congress

Card 3/3

On the Dependence of the Secondary Emission of Negative Ions From the Angle of Glide of Primary Protons on Collision With a Metallic Target

56-1-39/56

a target of aluminum and beryllium the coefficient of secondary ion emission at large angles of glide is negative, but at angles of glide below 3o - 4o it passes through the value zero and becomes positive. Previous heating of the targets to 9oo°C (for 2o minutes) made possible a reduction of the coefficient K^- for beryllium targets and an increase in the coefficient K^+ for copper. The results obtained here may be understood by the following considerations: The secondary ion emission contains real secondary negative ions as well as protons of the primary beam which are scattered by more than 9o° by the Coulomb field of the nuclei of the targets. The sign of the observed coefficient of secondary emission is then dependent on the relative portion of these two components. At an energy of the protons of 5o keV in the case of a target of copper and stainless steel the number of scattered protons is at all angles of glide higher than the number of the secondary negative ions. For targets of aluminum and beryllium in the case of angles smaller than 4o - 3o° the number of secondary negative ions is higher than the number of scattered protons. The arithmetical errors

Card 2/3

Mitropan I. M.

AUTHORS: Mitropan, I. M., Gumenyuk, V. S. 56-1-39/56

TITLE: On the Dependence of the Secondary Emission of Negative Ions From the Angle of Glide of Primary Protons on Collision With a Metallic Target (O zavisimosti vtorichnoy emissii otritsatel'nykh ionov ot ugla skol'zheniya pervichnykh protonov pri vstreche s metallicheskoy mishen'yu)

PERIODICAL: Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, 1958, Vol. 34, Nr 1, pp. 235-236 (USSR)

ABSTRACT: The present paper attempts the estimation of the modification of the coefficient K^- of the secondary emission of negative ions in dependence on the angle of glide of the proton beam on collision with a target. For their tests the authors used a beam of 50 keV-protons and a method already earlier described by them (reference1). The modifications made in this method are shortly described. The dependence obtained here for the coefficient of the secondary negative ion emission on the angle of glide of the beam are illustrated in a diagram. For copper and stainless steal ЭЯ- 1 this coefficient in the entire domain of the angles of glide investigated has a positive sign. In the case of

Card 1/3

bombarding of metal surfaces depends on the velocity of the primary ions, but obviously not on its mass. Secondary negative ion emission depends on the type of the target. The degassing of the target decreases the "emitting coefficient" K , and the number of emitted negative ions can become lower than the number of the fast primary positive ions scattered in the Coulomb field. The coefficient of the knocked out negative ions, the energy of which does not exceed 10 eV, is of the same order of magnitude as in the case of slow positive ions. (10 illustrations)

ASSOCIATION Physical-Technical Institute of the Academy of Science of the Ukrainian U.S.S.R.

PRESENTED BY
SUBMITTED 23.7.1956
AVAILABLE: Library of Congress.
Card 2/2

MITROPAN, I. M.

AUTHOR MITROPAN, I.M., and GUMENYUK, V.S. PA - 2663

TITLE Emission of Negative Ions from Metallic Surfaces Bombarded with Positive Hydrogen Ions. (Emissiya otritsatel'nykh ionov s poverkhnosti metallov pri bombardirovke polozhitel'nymi ionami vodoroda, Russian)

PERIODICAL Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol 32, Nr 2, pp 214 - 222 (U.S.S.R.)

Received: 5/ 1957 Reviewed: 6 / 1957

ABSTRACT It is the aim of the present work to determine the coefficient of the knocking out of secondary negative ions and its dependence of the energy of primary hydrogen ions. The authors determine this coefficient on those metals which are used for the construction of high voltage accelerator tubes in laboratory practice. Besides, the authors carried out a mass spectroscopic analysis of the negative ions formed.

First the apparatus and the measuring method are discussed. The hydrogen ions were accelerated by means of an electrostatic generator fitted with a mass analyzer at its output.

Summary of results: The coefficient of the knocking-out of negative ions decreases monotonously with the increase of the energy of the primary hydrogen ions. The probability of the production of negative ions on the occasion of the

Card 1/2

ZHARIKOVA, G.G.; SAVCHENKO, G.V.; MITRONOVA, T.N.

Dissociation forms of Bacillus brevis var. G.B. Mikrobiologiia 33 no.4:605-609 Jl-Ag '64. (MIRA 18:3)

1. Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo universiteta.

MITRONOVA, T.M.; ZHARIKOVA, G.G.

Method of obtaining spores from four forms of Bacillus brevis var. G.-B. Mikrobiologiia 34 no.5:835-839 S-O '65. (MIRA 18:10)

1. Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo universiteta imeni M.V. Lomonosova.

ZHARIKOVA, G.G.; KOVYAZIN, N.V.; LUKIN, A.A.; MITRONOVA, T.N.; SAVCHENKO, G.V.; SILAYEV, A.B.; SUSHKOVA, I.V.

Production of gramicidin C by the flat form of Bacillus brevis var. GB. Antibiotiki 8 no.3:228-232 Mr'63 (MIRA 17:4)

1. Laboratoriya antibiotikov i kafedra genetiki biologo-pochvennogo fakul'teta Moskovskogo universiteta imeni Lomonosova.

KORCHAGIN, V.B.; MITRONOVA, R.M.; VAKULENKO, N.A.

Spectrophotometric determination of erythromycin. Antibiotiki 9 no.9:851-854 S '64. (MIRA 19:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov, Moskva.

MITROKOV, V.

Automatic transmitter used for radiotelephone alarm signals.
Mor. flot 18 no.11:25-26 N '58. (MIRA 11:12)

1.Nachal'nik sluzhby svyazi i elektroradionavigatsii Estonskogo parokhodstva.
(Radio in navigation)

Methods of Measuring the Electret Charge

G. I. Skanavi for his advice and to V. S. Mashtakov and V. D. Kopanev for their help in carrying out this work.
There are 7 figures and 7 references, 3 of which are Soviet and 4 English.

ASSOCIATION: Fizicheskiy institut AN SSSR (Physics Institute, Academy of Sciences USSR)

SUBMITTED: July 3, 1958.

Card 7/7

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001134700011-6

Methods of Measuring the Electret Charge

is known. Since in practice it is not possible to measure the current density j_3, the charge density on the electret can be found only in the special cases $j_2 = 0$ and $j_3 = 0$. For ceramic electrets the depolarization method yielded values of $\sigma \approx 10^{-9} \div 10^{-8}$ coulomb/cm^2. The third method of measuring the surface charges on electrets uses interactions in the electret field. Two variations of this method are employed: 1) displacement of a movable electrode in the field of an electret and 2) deviation of an electron beam in the electret field. Both these variants yield the charge density induced on the electrode A (Eqs 13 and 14), and Eq (1) has to be used to obtain the surface charge density on the electret. Acknowledgments are made to

Methods of Measuring the Electret Charge

σ_f^o) and free (homo-charge σ_r^o) charges of an electret. This may be due to disorientation of the "dipoles" by thermal motion (producing a displacement current of density j_1), due to mutual neutralization of free charge in the internal field of the electret E_i (producing current of density j_2) and due to transfer of free charge from the electret surface to an external electrode (producing a displacement current of density j_3). The current density in the external circuit joining the two electrodes A and B (Fig 7) is given by:

$$I = K \left(- \frac{d\sigma^o}{dt} + j_3\right)$$

where $$K = \left[\varepsilon \, (d_1 + d_2)/L + 1\right]^{-1} .$$

By measuring the variation of I with time, which is large when electrets are depolarized artificially by heating or illumination, the value of σ^o can be found if j_3

Methods of Measuring the Electret Charge

shows schematically one of the vibrators used in measurements, following the first variant of the electrostatic induction method. The moving system, which includes the electret (8 in Fig 3) vibrates due to interaction of an alternating magnetic field of a coil 7 with a field of a permanent magnet 2 . This vibrator can be used in conjunction with a selective amplifier shown in Fig 4. Fig 5 shows another vibrator (only the upper electrode is moved, the electret is kept fixed). The vibrations are produced by interaction of a steel core 13 with an alternating magnetic field of a solenoid 9 . Fig 6 shows a device for measuring the electret surface charge using the second (rotating vane) variant of the electrostatic induction method. The vane 10 is rotated at 100-200 c/s. The second method of measuring the electret surface charge uses depolarization of electrets which occurs spontaneously during storage. The depolarization consists of a slow decrease of the amount of bound (hetero-charge

Methods of Measuring the Electret Charge

of a voltmeter used in measurements and C_o is the capacitance which shunts the voltmeter). If $C \gg C_1$ the induced charge on the electrode A is given by $\sigma^o = q/S$, where S is the electret surface area. If the inequality $\varepsilon(d_1 + d_2)/L \ll 1$ is not satisfied (this happens in the case of electrets with high permittivity), the σ^o is calculated using Eq (1). The authors discuss two variants of the electrostatic induction method which use the relationship between the electret surface charge and the displacement current generated in an alternating electret field. In the first variant the electret field is varied by vibrating the electrode A above the electret surface. In the second variant the electret field is varied by rotation of a metal vane ("biscuit") between the electrode A and the electret surface. The authors derive equations (Eqs 4-7) which give the electret surface charge for both variants; Eqs (5) and (7) apply in the special case when $\sigma_1^o = -\sigma_2^o = \sigma^o$ i.e. when the charge densities on two opposite electret surfaces are equal in magnitude but opposite in sign. Fig 3

Methods of Measuring the Electret Charge

charge induced on the electrode A by the charge on the m-th surface of the electret. Three methods of measuring the electret surface charge are discussed in the present review. One of these methods is the electrostatic induction method (Fig 2). The electrode A is lowered until it is in contact with the upper electret surface with the switch K closed. It follows then from Eq (1) that if $\varepsilon(d_1 + d_2)/L \ll 1$, and $\sigma_1^0 \approx \sigma_2^0$, then a charge equal and opposite in sign to the charge on the electret surface is induced on the electrode A . The switch K is then opened and the electrode A is raised. If $\varepsilon d_1/L \gg 1$, then the induced charge on the electrode A is almost completely free and it distributes itself between the capacitances C_1 and $C = C_v + C_0$, connected in parallel (C_1 is the capacitance of the electrode A , C_v is the capacitance

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AUTHORS: Gubkin, A.N., Mitronina, V. S., Sergiyenko, V. F., Subbotin, M. I.

TITLE: Methods of Measuring the Electret Charge

PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 4, pp 113-118 (USSR)

ABSTRACT: The authors review methods and equipment used in measurement of the surface charge of electrets. The review begins with a description of the electric field of an electret between two metal electrodes at the same potential (the "short-circuited electret", Fig 1). Gubkin (Ref 6) showed that the electric fields between the electret surfaces and the metal electrodes and the field inside an electret are given by Eqs (1) and (2) where E^{e}_{mA} is the electric field between the m-th electret surface and the electrode A ; E_i is the electric field inside the electret; d_1 and d_2 are the gaps between the electrodes A and B and the electret surfaces; σ^{e}_{1} and σ^{e}_{2} are the absolute densities of charge on the first and second electret surfaces respectively; L is the electret thickness; ε is the permittivity of the electret material; σ^{A}_{m} is the surface density of a

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Production of Chromium-magnesite Bricks From Chromite of the Shorzhinskaya Deposit

final applicability of Shorzhinskiy chromite as a raw material it is necessary to produce from it an experimental lot of refractories. There are 4 tables.

ASSOCIATION: Pantelegr[illegible] (Pantelegr[illegible] monovka)

Card 2/2

15(2)

AUTHORS: Fayngerman, F. A., Nitrokhina, E. S.

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B015/B005

TITLE: Production of Chromium-magnesite Bricks From Chromite of the Shorzhinskaya Deposit

PERIODICAL: Ogneupory, 1960, Nr 3, pp 105-107 (USSR)

ABSTRACT: In this paper the authors give the investigation results concerning the chromite of the Shorzhinskaya deposit (Armyanskaya SSR) which is to replace the chromite of the Saranovskiy and Kimpersayskiy deposits hitherto used. Table 1 shows the chemical composition of the chromites, table 2 the composition of the furnace charge. Tables 3 and 4 indicate the mass granulations and properties of the chromium-magnesite products. In conclusion, the authors state that chromite has a dense structure and may be ground without forming a great quantity of the fraction below 0.5 mm, thus permitting to obtain unsorted pieces with a high weight by volume. The quality of the Shorzhinskiy chromite bricks is somewhat better than that of the Saranovskiy and Kimpersayskiy chromite bricks, and corresponds fully to the requirements of GOST 5381-50. To determine the

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